

## CLAIMS

What is claimed is:

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1. An antibody or antigen-binding fragment thereof, which binds to a mammalian  
5 GPR-9-6 and inhibits the binding of a ligand to said GPR-9-6.
  2. The antibody or antigen-binding fragment of Claim 1 wherein said mammalian  
GPR-9-6 is human GPR-9-6.
  3. The antibody or antigen-binding fragment of Claim 1 wherein said ligand is  
TECK.
  - 10 4. The antibody or antigen-binding fragment of Claim 1 wherein the binding of  
said antibody or said antigen-binding fragment to GPR-9-6 can be inhibited by a  
peptide that consists of the amino acid sequence of SEQ ID NO:3.
  5. The antibody or antigen-binding fragment of Claim 1 wherein the binding of  
said antibody or said antigen-binding fragment to GPR-9-6 can be inhibited by  
15 mAb 3C3.
  6. The antibody or antigen-binding fragment of Claim 5 wherein said antibody or  
antigen binding fragment binds to the same or a similar epitope as mAb 3C3.
  7. An antibody produced by murine hybridoma 3C3 or an antigen-binding  
fragment thereof.

8. An isolated cell which produces an antibody or antigen-binding fragment thereof which binds to a mammalian GPR-9-6 and inhibits the binding of a ligand to said GPR-9-6.
9. The isolated cell of Claim 8 wherein said mammalian GPR-9-6 is human GPR-9-6.
10. The isolated cell of Claim 9 wherein said ligand is TECK.
11. The isolated cell of Claim 10 wherein said isolated cell is selected from the group consisting of an immortalized B cell, a hybridoma and a recombinant cell comprising one or more exogenous nucleic acid molecules that encode said antibody or antigen-binding fragment thereof.
12. The murine hybridoma 3C3.
13. A method of detecting a mammalian GPR-9-6 or portion thereof by in a biological sample, comprising:
- a) contacting a biological sample with an antibody or antigen-binding fragment thereof which binds to a mammalian GPR-9-6 or portion of said receptor and inhibits binding of a ligand to the receptor, under conditions appropriate for binding of said antibody or antigen-binding fragment thereof to a mammalian GPR-9-6 or portion thereof; and
- b) detecting binding of said antibody or antigen-binding fragment thereof; wherein the binding of said antibody or antigen-binding fragment thereof indicates the presence of said receptor or portion of said receptor.
14. The method according to Claim 13, wherein the biological sample is of human origin.

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15. The method according to Claim 14, wherein the antibody or antigen-binding fragment thereof is selected from the group consisting of:
- a) mAb 3C3;
  - b) an antibody which can compete with mAb 3C3 for binding to a mammalian GPR-9-6;
  - c) antigen-binding fragments of (a) or (b) which bind a mammalian GPR-9-6 or a portion thereof; and
  - d) combinations of the foregoing.
16. A method of detecting and identifying an agent which binds to a mammalian GPR-9-6 or a ligand binding variant thereof comprising combining:
- a) a reference agent,
  - b) a test agent, and
  - c) a composition comprising a functional mammalian GPR-9-6 or a ligand binding variant thereof under conditions suitable for binding of said reference agent to said GPR-9-6 or ligand-binding variant thereof; and detecting or measuring the formation of a complex between said reference agent and said GPR-9-6 or a ligand binding variant thereof, wherein, a decrease in the formation of said complex relative to a suitable control indicates that said test agent binds to said GPR-9-6 or to a ligand-binding variant thereof.
17. The method of Claim 16 wherein said reference agent is labeled with a label selected from the group consisting of a radioisotope, an epitope, an affinity label, an enzyme, a fluorescent group and a chemiluminescent group.
18. The method of Claim 16 wherein said reference agent is TECK.

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19. The method of Claim 16 wherein said reference agent is an antibody which binds to said GPR-9-6 or an antigen-binding fragment thereof.
20. The method of Claim 16 wherein said composition comprising a functional mammalian GPR-9-6 or a ligand binding variant thereof is a cell that expresses a mammalian GPR-9-6.
21. The method of Claim 20 wherein said cell is a recombinant cell.
22. The method of Claim 20 wherein said cell is a cell line.
23. The method of Claim 23 wherein said cell is selected from the group consisting of MOLT-4 and MOLT-13.
24. The method of Claim 16 wherein said composition comprising a functional mammalian GPR-9-6 or a ligand binding variant thereof is a membrane preparation of a cell that expresses a mammalian GPR-9-6 or a ligand binding variant thereof.
25. A method of detecting or identifying an inhibitor of a mammalian GPR-9-6 receptor comprising:
- a) combining an agent to be tested, a ligand or promoter of said GPR-9-6 and a cell expressing said GPR-9-6 under conditions suitable for detecting a ligand- or promoter-induced response; and
  - b) determining the ability of the test compound to inhibit said response, wherein inhibition of a ligand- or promoter-induced response by the agent is indicative that the agent is an inhibitor.

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26. The method of Claim 25 wherein said cell is a recombinant cell expressing a human GPR-9-6.
27. The method of Claim 26 wherein said ligand or promoter is TECK.
28. The method of Claim 25 wherein said response is chemotaxis or  $\text{Ca}^{2+}$  flux.
- 5 29. A method of treating a subject having an inflammatory disease, comprising administering an effective amount of an antagonist of a mammalian GPR-9-6 function to said subject.
30. The method of Claim 29 wherein said inflammatory disease is Crohn's disease or colitis.
- 10 31. The method of Claim 29 wherein said antagonist inhibits the binding of a ligand to a mammalian GPR-9-6.
32. The method of Claim 31 wherein said ligand is TECK.
33. The method of Claim 31 wherein said antagonist is an antibody which binds to a mammalian GPR-9-6 or an antigen-binding fragment thereof.
- 15 34. A method of inhibiting GPR-9-6-mediated homing of leukocytes in a subject, comprising administering an effective amount of an antagonist of GPR-9-6 function to said subject.
35. The method of Claim 34 wherein said antagonist inhibits the binding of a ligand to GPR-9-6.

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36. The method of Claim 35 wherein said ligand is TECK.
37. The method of Claim 36 wherein said antagonist is an antibody which binds to GPR-9-6 or an antigen-binding fragment thereof.
- 5 38. A method of inhibiting GPR-9-6-mediated homing of leukocytes to mucosal tissue in a subject, comprising administering an effective amount of an antagonist of GPR-9-6 function to said subject.
39. A method of treating a subject having an inflammatory bowel disease, comprising administering an effective amount of an antagonist of GPR-9-6 function to said subject.
- 10 40. The method of Claim 39 wherein said antagonist inhibits the binding of a ligand to GPR-9-6.
41. The method of Claim 40 wherein said ligand is TECK.
42. The method of Claim 41 wherein said antagonist is an antibody which binds to GPR-9-6 or an antigen-binding fragment thereof.
- 15 43. A method of modulating a GPR-9-6 function comprising contacting a cell that expresses GPR-9-6 with an agent which binds thereto, thereby modulating the function of said GPR-9-6.
44. The method of Claim 43 wherein said agent can inhibit a function of GPR-9-6.
- 20 45. The method of Claim 44 wherein said agent is an antibody or antigen-binding fragment thereof.

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46. The method of Claim 45 wherein said function is selected from the group consisting of ligand binding, ligand-induced chemotaxis and ligand-induced  $\text{Ca}^{2+}$  flux.
47. The method of Claim 46 wherein said ligand is TECK.
- 5 48. A test kit for use in detecting the presence of a mammalian GPR-9-6 or portion thereof in a biological sample comprising
- 10 a) at least one antibody or antigen-binding fragment thereof which binds to a mammalian GPR-9-6 or portion of said receptor, wherein said antibody or antigen-binding fragment thereof inhibits binding of a ligand to the receptor; and
- b) one or more ancillary reagents suitable for detecting the presence of a complex between said antibody or antigen-binding fragment thereof and said mammalian GPR-9-6 or a portion thereof.
- 15 49. A test kit according to Claim 48, wherein the antibody is selected from the group consisting of
- a) mAb 3C3;
- b) an antibody which can compete with mAb 3C3 for binding to mammalian GPR-9-6;
- 20 c) antigen-binding fragments of (a) or (b) which bind to mammalian GPR-9-6 or a portion thereof; and
- d) combinations of the foregoing.

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